The Effects of Food Advertising Policy on Televised Nutrient Content Claims and Health Claims

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This study examined changes in nutrient content and health claims made in televised food advertisements before and after the Federal Trade Commission's 1994 food advertising policy, which is predicated on the Nutrition Labeling and Education Act (NLEA). Our sample included 105 and 108 advertisements broadcast during prime-time in 1992 and 1998, respectively. The rate that nutrient content and health claims were used was low in both years. And none of the advertisements contained diet-disease health claims authorized by the Food and Drug Administration. Although current food advertising policy virtually eliminates deceptive advertisements, it may also limit diet-disease health claims in broadcast media. More flexibility in presenting diet-disease health claims in broadcast media advertising could increase the use of such claims and contribute to the goal of NLEA to educate consumers.

The decision to purchase a food is influenced by many factors, one of which is advertising *(7,8,36,43)*. Advertisements traditionally promoted foods and beverages by featuring mainly sensory qualities, convenience, and economic factors *(10,44)*. In recent years some of these advertisements have tried to influence consumer-purchasing decisions by also touting nutritional or health qualities or both *(29,32)*.

Food advertising, like advertising for nearly all products, is regulated by the Federal Trade Commission (FTC). Historically, the FTC permitted nutrient claims (e.g., "high in fiber") in advertising and never formally prohibited diet-disease health claims (i.e., claims that explicitly linked the consumption [or lack of consumption] of a particular nutrient or other substance in a food to a disease or health-related condition [e.g., "a calcium-rich diet can help prevent osteoporosis"]) *(32)*. However, if diet-disease health claims were made on the label, the Food and Drug Administration (FDA) reclassified the food as a drug and required the manufacturer to adhere to the drug-approval procedures of the FDA *(29)*. For years food advertisers did not make diet-disease health claims about their products, but as the connection between diet and health became increasingly clear, food manufacturers and advertisers grew interested in using this information to sell their products. Consequently, in 1984, the Kellogg Company initiated an advertising campaign that explicitly described the relationship between a high-fiber diet and reduced risk of certain types of cancer. When the FDA failed to prosecute this direct violation of

diet-disease health claims, other food manufacturers launched similar campaigns *(18,29)*. Marketing strategies that included diet-disease health claims did provide consumers with information about nutrition and health. However, in their zeal to gain a competitive edge, advertisers also pushed the limits of what science could support and what consumers would believe *(18,25)*.

To stem questionable marketing practices and restore consumer confidence, the Nutrition Labeling and Education Act (NLEA) was passed in 1990 and became fully effective in 1994 *(27)*. The NLEA overhauled nutrition labels on food packages, expanded the scope of nutrition labeling, explicitly defined nutrient content claims, and regulated diet-disease health claims *(25)*. While the new food-labeling regulations did much to improve the quality of information on food packages, these regulations did not extend to food advertising *(41)*. Fortunately, in its efforts to prevent deceptive or misleading claims, the FTC announced in 1994 that it would apply the standards set forth in the NLEA to evaluate nutrient content and diet-disease health claims made in food advertisements *(14)*. The FTC reported that its goal was to create a food advertising policy that would help ensure that food advertising messages are congruent with data presented and are permitted on food labels *(15)*.

While food and beverage advertisements appear in all types of print, broadcast, and electronic media, television is the preferred advertising medium of food manufacturers—over 75 percent of their 1997 advertising budget was spent on televised advertising *(17)*. The food and alcohol industry accounted for more than one-sixth of the $73-billion mass media advertising market; only the automobile industry spent more on advertising (*17)*.

Although some studies have examined the nutrient content claims and health claims in food advertising, few have focused on televised advertising. Furthermore, no studies could be located that compared changes in nutrient content claims and health claims over time or examined the effect of the NLEA and FTC food advertising policy on televised food advertisements. Thus the purpose of this study was to examine changes in the nutrient content claims and health claims made in televised food advertisements before and after the enactment of the new food advertising policy of the FTC, a policy which is based on the NLEA, and to determine whether the use of claims varied by type of food product advertised.

Methods

Sample

In the autumn of both 1992 and 1998, 17.5 hours of top-ranked, prime-time[1] were videotaped. This study focused on prime-time and major networks because they traditionally have the largest viewing audience (*35)*. The sample comprised all commercials broadcast during the sampling period. Commercials (i.e., all non-program time) included advertisements, public service announcements, and promotions for television programs. Although all commercials were recorded and analyzed, only data pertaining to food advertisements are presented here. A food advertisement was defined as a paid-commercial announcement that specifically promoted a food, beverage, or dietary supplement intended for human consumption.

[1]Prime-time refers to programming broadcast from 8 p.m. to 11 p.m. Monday through Saturday, and 7 p.m. to 11 p.m. on Sunday. Major networks refer to *ABC, CBS, NBC, Fox,* and *WB*; note *WB* became a network in 1998.

Instrument

The food advertisements were content and textually analyzed by using the study instrument that was adapted from those reported elsewhere *(5,19,28,38, 40,50)*. Content analysis permits systematic, objective evaluation of visual and linguistic elements *(6,24)*. Textual analysis allows researchers to investigate how linguistic elements are used, their significance, and their contribution to understanding a topical area *(4,38)*.

Content analysis began by eliminating all nonfood commercials. All food advertisements were then classified into 11 food categories based largely on the USDA Food Guide Pyramid *(47)*: Breads and cereals, vegetables, fruits, protein-rich foods (i.e., eggs, meat, poultry, fish, shellfish, nuts, and seeds), dairy products, high-sugar foods (e.g., syrup, candy, and soft drinks), high-fat foods (e.g., butter, oils, and salad dressing), alcohol-containing beverages (i.e., wine), calorie-free beverages, dietary supplements, and miscellaneous items (i.e., seasonings).

Restaurant advertisements frequently highlighted a variety of food items that together comprised a meal. Thus to evaluate the nutritional value of the foods advertised, we assigned all items in an advertised meal to the appropriate food categories. In addition, combination foods (e.g., fast-food sandwiches and soups) were broken down into their component parts and appropriately assigned to two or more of the food categories. Foods in the first five categories listed previously were further classified by nutrient density: low, moderate, and high. Methods described in detail elsewhere were used to classify density *(51)*. In brief, foods low in nutrient density tended to be ones that are highest in fat in each of the first five categories (e.g., pastries, French fries, coconut, luncheon meats, and whole milk). Foods moderate in

nutrient density were less nutrient dense than were foods high in nutrient density (e.g., breads made with enriched flour instead of whole grains, candied sweet potatoes instead of plain vegetables, fruits canned in syrup rather than fresh or canned in unsweetened juice, fat-trimmed beef instead of skinless poultry white meat, or lowfat instead of nonfat milk). Foods high in nutrient density provided the greatest level of nutrients per kilocalorie.

The subsequent step, requiring textual analysis, involved identifying and coding nutrient content claims as either (a) *Contains Specific Nutrient* or (b) *Minimizes (or eliminates) Specific Nutrient*. Nutrient content claims, defined in the FDA and USDA's food-labeling regulations, include 11 core terms that can be used to describe the nutrient content of foods: good source, more, high, free, low, lean, extra lean, reduced, less, light, and fewer *(42)*. An advertisement that indicated a food contained a nutrient was classified as a *Contains-Specific-Nutrient* content claim. For example, the advertisement may have included the terms *good source of vitamin C*, *more fiber*, *high in calcium*, or used a similar inclusionary adjective followed by a nutrient name. An advertisement indicating a lack of or minimal nutrients or calories was coded as a *Minimizes-Specific-Nutrient* content claim. This type of advertisement may have included the terms *sugar free*, *low fat*, *lean meat*, *reduced saturated fat*, *less cholesterol*, *fewer calories*, or used a similar exclusionary adjective followed by a nutrient name.

The last step, also requiring textual analysis, involved identifying and classifying health claims as general wellness claims, for example, "healthy" and "good for you"[2] or specific health claims: for example, describing the relationship of a food or nutrient to health or disease. Specific health claims were further grouped according to the 10 diet-disease health claims authorized by the FDA, as of September 1998 *(26)*:

- calcium and osteoporosis
- sodium and hypertension
- dietary fat and cancer
- dietary saturated fat and cholesterol and risk of coronary heart disease
- fiber-containing grain products, fruits, and vegetables and cancer
- fruits, vegetables, and grain products that contain fiber, particularly soluble fiber, and risk of coronary heart disease
- fruits and vegetables and cancer
- folate and neural tube defects
- dietary sugar alcohols and dental caries
- dietary soluble fiber (such as that found in whole oats and psyllium seed husks) and coronary heart disease

Data Analysis

Data from each food advertisement were recorded, and all foods and claims were categorized independently by one researcher. All coding was checked for inter-observer reliability by independent double coding of the food advertisements by a second researcher. All discrepancies were resolved to reach unanimous agreement. For every 3 hours of recorded programming, the researchers alternated coding the advertisements in 1992 and 1998. This procedure helps to avoid a systematic bias that might have been caused by

The nutrient-density advertising trends indicate a deteriorating "prime-time diet" that promotes dietary patterns implicated in the etiology of obesity, heart disease, and certain cancers.

[2]FDA food-labeling regulations categorize "healthy" claims as a nutrient content claim. However, because specific nutrients were not termed "healthy," claims were categorized in this study as general health claims.

chronological trends. The test-retest method was used to establish intra-coder reliability *(21)*. That is, each researcher coded commercials that were shown in 1 hour of televised programming that was representative of the study sample. This coding was done twice, with a 14-day interval separating the coding periods. The intra-coder coefficients indicated a high index of consistency: 0.92 and 0.93.

The frequency that food categories were advertised was tabulated over the two sampling periods. A chi-square statistic was used to determine whether significant differences existed in the food categories advertised as well as in the nutrient density of foods advertised *(1,16)* and to determine whether significant differences in nutrient and health claims occurred between 1992 and 1998 *(16)*.

Results

Changes in Food Advertisement

During the sampling period for 1992, there were 535 commercials, of which 105 were food advertisements; during 1998, there were 700 commercials, of which 108 were food advertisements. Only findings related to food advertisement are reported here. Except for calorie-free beverages and dietary supplements, the frequency with which each food category was advertised was similar in 1992 and 1998 (table 1). In 1992 and 1998, breads and cereals were the most frequently advertised foods, followed by vegetables, protein-rich foods, and high-sugar foods. These four food categories were the most frequently advertised—mostly because of the substantial number of advertisements for fast-food restaurant meals (i.e., meat-containing sandwiches, French fries, and regular soft drinks). For either year, fruits and dairy products were rarely advertised.

Table 1. Televised food advertisements during prime-time viewing, 1992 and 1998

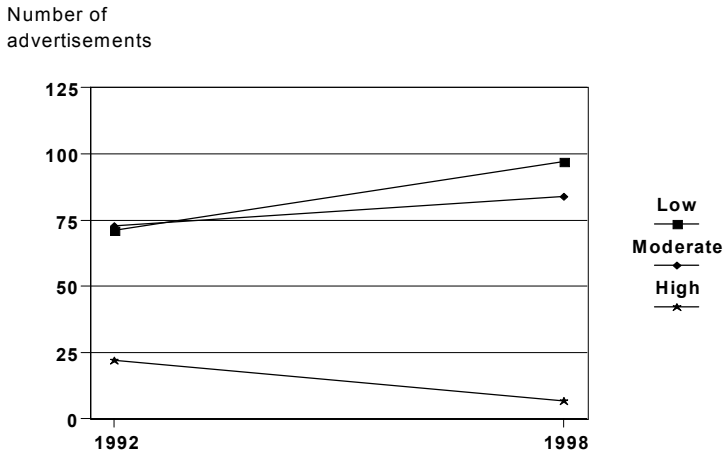
Food category	Year 1992		Year 1998	
Number of advertisements	169		209	
	Number	*Percent*	*Number*	*Percent*
Breads and cereals*	60	36	62	30
High nutrient density	5	3	0	0
Moderate nutrient density	47	28	50	24
Low nutrient density	8	5	12	6
Vegetables*	33	20	28	13
High nutrient density	16	9	3	1
Moderate nutrient density	0	0	0	0
Low nutrient density	17	10	25	12
Fruit	1	<1	4	2
High nutrient density	1	<1	4	2
Moderate nutrient density	0	0	0	0
Low nutrient density	0	0	0	0
Protein-rich foods	33	20	42	20
High nutrient density	0	0	0	0
Moderate nutrient density	26	15	34	16
Low nutrient density	7	4	8	4
Dairy products	9	5	14	7
High nutrient density	0	0	0	0
Moderate nutrient density	0	0	0	0
Low nutrient density	9	5	14	7
Fats, sweets, and alcohol	30	18	38	18
High-sugar foods	23	14	32	15
High-fat foods	6	4	2	1
Alcohol-containing beverages	1	<1	4	2
Kcalorie-free beverage	0	0	12	6
Dietary supplements	0	0	7	3
Miscellaneous[1]	3	2	2	1

[1]Miscellaneous includes foodstuffs of minimal nutritional value not included in other categories, such as seasonings.
*Food advertisements are significantly different between 1992 and 1998, based on 3-way Chi-square tests. For vegetables, Chi-square = 10.081and the p-value = 0.0065; for breads and cereals, Chi-square = 5.8616 and the p-value = 0.0534.

Significant differences existed in the nutrient density of two food categories advertised between 1992 and 1998—vegetables, followed by breads and cereals. For vegetables, the primary difference was the shift from nearly equal numbers of 1992 advertisements for vegetables low and high in nutrient density to 1998 advertisements almost exclusively featuring vegetables low in nutrient density. For breads and cereals, advertisements shifted from featuring similar numbers of breads and cereals that were low and high in nutrient density in 1992 to featuring no breads and cereals that were high in nutrient density in 1998.

An overall examination of the nutrient density of the foods advertised reveals that in 1992, advertisements for foods whose nutrient density is low (coupled with high-sugar foods, high-fat foods, and alcohol-containing foods) almost equaled the number of foods whose nutrient density is moderate (71 and 73 advertisements, respectively) and was more than three times larger (22 advertisements) than advertisements for foods whose nutrient density is high. By 1998 the number of advertisements for foods low in nutrient density, high in sugar, high in fat, and containing alcohol exceeded foods moderate in nutrient density (97 vs. 84) and were advertised nearly 14 times more frequently than foods high in nutrient density (7 advertisements). Statistical analysis shows a significant difference[3] between 1992 and 1998 advertisements, with the most important difference being the decrease in advertisements for foods high in nutrient density. The increase in advertising of foods low in nutrient density was made at the expense of advertising for their counterparts high in nutrient density. The nutrient-density advertising trends indicate a deteriorating "prime-time diet" that promotes dietary patterns implicated in the etiology of obesity, heart disease, and certain cancers (fig. 1) *(34,52)*.

Figure 1. Prime-time televised advertisements of foods, by nutrient density, 1992 and 1998



Nutrient Content Claims and Health Claims

Overall, the use of nutrient content claims was low in both sampled years (table 2). Significantly more *Minimizes-Specific-Nutrient* content claims than *Contains-Specific-Nutrient* content claims were made in 1992. No significant differences existed between the types of nutrient content claims made in 1998.

A comparison of the types of nutrient content claims made between 1992 and 1998 indicates that a significant difference existed.[4] Most important was the increase in 1998 for *Contains-Specific-Nutrient* content claims. The change in this type of claim, constituting 72 percent of the chi-square value, was the result of a rise in the number of advertisements for fruits and dietary supplements that included nutrient content claims. Advertisements for fruits that included nutrient content claims rose from 1 to 4 in the sample years. The increase in these types of televised advertisements for dietary supplements went from zero to 7. In addition to the foods that were promoted with a *Contains-Specific-Nutrient* content claim, an additional 11 advertisements (data not shown) in each sampled year promoted foods by highlighting the presence of specific ingredients—all but one of which were foods traditionally thought of as "nutritious" (i.e., fruit, grain, vegetable, cheese). The only nonfood ingredient was kavakava, an herbal tea additive.

In 1992, 11 percent of the televised food advertisements had *Minimizes-Specific-Nutrient* content claims; by 1998, 16 percent of the televised food advertisements used this type of claim. However, this increase was not significant. The main contributor to the increased prevalence of *Minimizes-Specific-Nutrient* content claims was advertisements of calorie-free beverages, specifically those for PepsiOne®. PepsiOne® was heavily advertised because it uses the newly approved

[3] Chi-square = 10.71, p-value = 0.0047.

[4] Chi-square = 6.038, p-value = 0.0488.

Table 2. Percentage of televised food advertisements[1] containing nutrient or health claims, 1992 and 1998

Food category	Nutrient claims and year: Contains specific nutrient 1992	Contains specific nutrient 1998	Minimizes specific nutrient 1992	Minimizes specific nutrient 1998	Health claims and year: All health claims 1992	All health claims 1998
			Percent			
Total	3*	11	11*	16	25	25
Breads and cereals	3	2	3	3	14	8
Vegetables	0	0	0	0	2	1
Fruit	0	3	0	0	0	3
Protein-rich foods	0	0	0	2	0	3
Dairy products	0	0	2	1	0	1
High-sugar foods	0	0	3	2	6	1
High-fat foods	0	0	1	0	1	0
Alcohol-containing beverages	0	0	0	0	0	0
Kcalorie-free beverages	0	0	0	6	0	1
Dietary supplements	0	0	0	2	0	7
Miscellaneous	0	0	2	0	2	0

[1]N=105 in 1992; N=108 in 1998.
Note: Claim categories are not additive because a food advertisement could include more than one claim category.
*Nutrient claims are significantly different; p-value=0.0287.

sweetener Splenda® *(12)*, which is promoted as tasting more like sugar than other artificial sweeteners. Also in 1998, one advertisement (data not shown), in addition to those promoted using a *Minimizes-Specific-Nutrient* content claim, billed a beverage as being caffeine-free.

Most of the televised advertisements that included health claims used claims related to general wellness: 72 percent in 1992 and 68 percent in 1998 (data not shown). Only 7 health claims in 1992 and 8 health claims in 1998 were specific. In 1992 most (n=4) of the specific health claims were made in advertisements for chewing gum that included statements like "helps fight cavities." A cereal advertisement (shown two times) stated that "beta-carotene is important for health," but it gave no additional information. An advertisement for cooking oil indicated that the product could make traditional meals more healthful because it was low in saturated fat; no mention was made of this product being 100 percent fat. In 1998 most specific health claims were for advertisements of dietary supplements. One televised advertisement for a dietary supplement indicated that the supplement was a "healthy way to lose weight" and included a disclaimer that the weight-loss images shown were not typical. Another advertisement for a dietary supplement stated that the supplement built muscle mass; it did not include any other qualifying information. Yet another advertisement (shown three times) implied that a supplement could replace the minerals lost during pregnancy and could keep a woman's bones strong into old age. Neither the supplement's name nor its nutrient content was stated, and osteoporosis was not specifically mentioned. One chewing gum was advertised as being able to decrease plaque. Only two conventional food items made specific health claims. An herbal tea was promoted as being able to decrease stress, but it included a disclaimer that advertising statements had not been evaluated by the FDA. A calcium-fortified orange juice was advertised as helping to build strong bones, with no mention of osteoporosis.

In both 1992 and 1998 none of the advertisements classified as having specific health claims complied with the FDA's criteria for diet-disease health claims and were, in reality, structure/function claims. Structure/function claims link a food or the effect of a food substance to the structure or function of the body and do not relate food or food substances to disease or health conditions *(23)*. For example, the previously mentioned advertisement for orange juice described the effect of calcium on the structure of bones.

Discussion

When interpreting the findings of this study, readers must consider that, as is the case with any observational study, assessing the effect of policy change is difficult because other factors, including those that are societal, political, and scientific, shift during the time a policy is adopted *(32)*. In addition, the sample for this study was limited to food advertisements shown during 17.5 hours of prime-time network programming over 2 years. Nonetheless, the observations made in this study do reflect the content of food advertisements shown to a nationwide audience during the most heavily watched time frame for an amount of time nearly equal to the entire prime-time period of 1 week in 2 years *(35)*.

In 1987 Lord et al. concluded that food advertisements in magazines had not "jumped on the bandwagon" by using health and nutrition claims *(29)*. The limited number of televised food advertisements that included either nutrient content claims or health claims before or after the implementation of the NLEA and the FTC Food Advertising Policy suggests that the conclusion reached by Lord et al. *(29)* is still valid and applicable to televised advertising.

The continuing low usage of health and nutrition claims seems surprising because researchers have found that consumers rate foods as being more nutritious when the foods are in advertisements that include more nutrition information *(3,39,49)*. It remains unclear, however, how perceived nutritional value affects purchasing behavior. The lack of clearly defined regulations for using nutrient content claims and health claims may have discouraged advertisers from using such claims in 1992 *(32)*. Although growth in nutrient content claims exceeded that of health claims, advertisers did not embrace either type of claim in the televised advertisements sampled in 1998, when the regulations were specified and an advertising policy had been in place for several years.

Why food advertisements sampled in this study seldom included nutrient content claims or health claims remains a question. The rate with which nutrient content claims were used in 1998 may have exceeded that of diet-disease health claims because diet-disease health claims tend to be temporarily associated with regulatory activity. That is, advertising campaigns that focus on a diet-disease health claim often occur immediately after a diet-disease health claim rule is finalized *(20)*. This temporal association, in conjunction with the relatively short life of most advertising campaigns, may mean that the inclusion of diet-disease health claims in advertisements is likely to come in bursts.[5] While the diet-disease relationships in approved FDA health claims are continually important from the perspective of nutrition education, they often are not so from the perspective of televised

Advertisers have significant potential, while promoting their products, for increasing consumer awareness of diet-health relationships and improving dietary choices consumers make.

[5]There were no new diet-disease health claim proposals or rules in 1998 until after the data for this study were collected.

advertisements. This may be the case because of the outlook that "old news is no news," or perhaps because food advertisements centered on diet-disease health claims influence sales less heavily than advertisements focusing on hedonic qualities. However, because research conducted by food manufacturers to assess the effect of advertising campaigns is proprietary, it is rarely available to those outside the company *(8)*.

Another reason why the frequency of nutrient content claims in 1998 exceeded that of diet-disease health claims may be the result of regulations for nutrient content claims being more straightforward and capable of being made succinctly (e.g., No Calories! Zero Fat!). In contrast, diet-disease health-claim regulations for food labels are more complex and require considerable disclosure of information. For example, calcium- and osteoporosis-claim requirements state that

> food or supplement must be "high" in calcium; must not contain more phosphorus than calcium. Diet-disease health claims must cite other risk factors; state the need for regular exercise and a healthful diet; explain that adequate calcium early in life helps reduce fracture risk later by increasing as much as genetically possible a person's peak bone mass; and indicate that those at greatest risk of developing osteoporosis later in life are White and Asian teenage and young adult women, who are in their bone-forming years. Claims for products with more than 400 mg of calcium per day must state that a daily intake of over 2,000 mg offers no added known benefits to bone health. *(13, p. 24)*

Although the FTC does not explicitly state that the same level of information disclosure is required in advertisements, its policy makes it clear that the commission will "be especially vigilant in examining whether qualified claims are presented in a manner that ensures that consumers understand both the extent of the support for the claim and the existence of any significant contrary view within the scientific community" *(14, p. 10)*.

The requirements of diet-disease health claims may negate the likelihood that they can be used in 15-, 30-, or even 60-second televised advertisements. These requirements likely contributed to the lack of specific information about diet-disease relationships conveyed by food manufacturers even though a number of advertised foods (e.g., fruit juice, milk, wild rice, and bran cereal) and newly formulated foods introduced in both sampled years *(12)* met the restrictions set by the FDA for one or more diet-disease health claims.

A goal of the NLEA was to educate consumers about how they can use nutrition information on food labels to maintain health *(11)*. Diet-disease health claims in advertising are an ideal mechanism for helping to achieve this goal and reaching consumers who are unaware of nutrition and health information. Plus, diet-disease health claims in advertisements in broadcast media are more likely to reach certain population groups, like adolescents, than diet-disease health claims on food labels *(23)*. Because television is the primary source of health and nutrition information for many Americans *(2,17)*, it may be worthwhile to consider how the FTC food advertising policy *(14)* could be adapted to better fit the constraints of broadcast media.

The revised standards for advertising prescription drugs on television and radio have resulted in more savvy, demanding consumers *(45)* who are readily discussing medical conditions or illnesses with a physician *(46)*. Proposed by the FDA in 1997, these standards were designed to make advertisements more understandable to consumers and to work with time and space constraints unique to broadcast media *(37,48)*. Thus the standards for advertising prescription drugs on television may provide a suitable model for televised food advertisements. That is, an advertisement for a food meeting the published requirements for a diet-disease health claim could be permitted to name the nutrient or ingredient in the advertised food and its link to a disease or health condition, along with adapting a method for consumers to obtain full product labeling and more complete information about the claim. More flexibility in shortening and simplifying diet-disease health claims in advertising could increase advertisers' "interest in creating compelling messages that will have an impact on consumer behavior" *(23, p. 96)*. In addition, researchers have suggested that diet-disease health claims in advertising would be most effective if provided in "plain English" *(33)*.

A food advertising policy that fits the constraints of broadcast media should benefit consumers because it could enhance opportunities, and thus the competitive pressure on food manufacturers, to promote the nutritional qualities of foods *(32)*. An example: even though the link between reduced cancer risk and high-fiber diets became stronger throughout the 1970's and early 1980's, the introduction of new high-fiber cereals during that period did not increase. After diet-disease

health claims in advertising began in late 1984, however, the number of households purchasing high-fiber cereals climbed *(22)*. Food manufacturers responded by developing new high-fiber cereals. Concomitantly, consumers' knowledge of the link between fiber and cancer increased profoundly. "Even before 1984, firms were permitted to disclose fiber content on cereal labels. Consequently, the dramatic effects on producer and consumer behavior are clearly linked to the use of the diet-disease health claim rather than the ability to disclose fiber content. In other words, it is important to permit firms to explain the reasons why consumers should care about fiber" *(32, p. 192)*.

Currently, the advertising policy for diet-disease health claims may not be an incentive to introduce new foods. Since the implementation of the FTC's current food advertising policy, the introduction of new products with healthful attributes dropped precipitously. In 1998, compared with 1992, the introduction of new products that were reduced/low calorie declined 60 percent; reduced/low fat, 6 percent; reduced/low salt, 87 percent; low/no cholesterol, 82 percent; added/high fiber, 71 percent; and reduced/low sugar, 76 percent. The only category that increased between these years was added/high-calcium products, with a 10-percent rise *(12)*.

Advertisers have significant potential, while promoting their products, for increasing consumer awareness of diet-health relationships and improving dietary choices consumers make *(32)*. Perhaps, if diet-disease health claims can be made more easily in the broadcast media, advertisers would use them more often, and they could spread vital diet and health information to a larger percentage of the population. Factors other than the release of FDA health claim rules and current advertising policy, however, may influence advertisers' decisions regarding the use of claims. Thus future investigations should include discussions with advertisers to identify those factors.

Conclusion

Television reaches almost every U.S. home and is a valuable means of disseminating health promotion images and messages that can help individuals and communities improve the quality of their lives. "The media should be encouraged to play a greater role in advocating for health, thus raising the public profile of health and ensuring that health becomes an important topic of public debate" *(52)*. Food advertisements are one method for disseminating information on diet-health relationships and improving consumers' dietary choices, although it is frequently argued that "advertising is always a dubious means of education, since it involves the testimony of interested parties" *(9)*. Nonetheless, in the United States, diet is linked directly to four of the top seven leading causes of disease and death *(51)*, and advertisements are designed to influence consumer-purchasing behavior (and in the case of food advertisements, eating behavior as well). Also, food advertisers have a budget that eclipses even the best-funded nutrition education campaigns. For example, food manufacturers spent $7 billion on advertising in 1997, compared with $333.3 million spent by the USDA on nutrition education *(17)*.

The current food advertising policy eliminates potentially deceptive advertisements, but it may also limit the inclusion of accurate diet-disease health claims in broadcast media. Thus it makes sense for regulatory agencies to examine food advertising policies and consider how the NLEA can be preserved so that advertisements for only truly nutritious foods can make diet-disease health claims, yet ensure that the inclusion of such claims in broadcast advertising is feasible. Two actions advertisers can take regarding health claims continue to be important from a public health perspective: (1) Advertisers can emphasize to consumers the value of nutrition-related product attributes *(30,31)*. (2) Advertisers can also emphasize the diet-disease relationships elucidated in FDA-approved health claims. Both actions point to the need for health professionals to work with food advertisers to encourage them to use diet-disease health claims whenever possible. Such steps will help to begin harnessing the power of the media to enhance the public's perception of the importance of healthful eating and reinforce the messages taught by nutrition professionals.

While the NLEA and FTC advertising policy does much to protect the public from misleading or deceptive advertising, neither the FDA nor FTC has sufficient staffing or funds to monitor the media sufficiently. Hence nutrition professionals need to continue developing consumer education programs that help individuals assess the validity of advertising claims and help them learn how to use advertising information to their advantage. Moreover, nutrition professionals may be able to capture consumers' attention more readily by using nutrient content claims and diet-disease health claims embedded in food advertisements as a springboard for more in-depth health promotion instruction.

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